

WE CLAIM:

1. A DNA which encodes a protein having esterolytic activity which cleaves the ester linkages of phenolic esters.
2. The DNA of claim 1, wherein said DNA is derived from a fungus, yeast or bacteria.
3. The DNA of claim 2, wherein said DNA is derived from a fungus.
4. The DNA of claim 3, wherein said DNA is derived from a filamentous fungus.
5. The DNA of claim 4, wherein said DNA is derived from *Aspergillus* and comprises a feruloyl esterase.
6. The DNA of claim 5, wherein said DNA comprises a partial sequence according to SEQ. ID. NO:29.
7. A DNA according to claim 1, wherein said DNA or part of said DNA encodes the amino acid sequence according to SEQ. ID. NO:28.
8. A DNA according to claim 1, wherein said DNA or part of said DNA encodes an amino acid sequence which is a derivative of the sequence according to SEQ. ID. NO:28.
9. A DNA according to claim 1, wherein said DNA comprises at least a part which is capable of hybridizing under low-stringency conditions with a DNA comprising all or part of the DNA sequence according to SEQ. ID. NO:29.
10. The DNA according to claim 9, wherein said DNA is capable of hybridizing under standard-stringency conditions.
11. A method of isolating a DNA which encodes a protein having esterase activity comprising:
  - (a) creating a library comprising fragments from a first DNA derived from a plant, animal, fungus, yeast or bacteria;

(b) combining said library of said first DNA with a probe comprising a second DNA under low-stringency conditions to effect hybridization between said fragments in said library of DNA and said probe wherein said probe comprises DNA corresponding to SEQ. ID NO:29 or a portion thereof comprising at least 100 nucleotides.

12. The method according to claim 11, wherein said first DNA is derived from a filamentous fungus.
13. The method according to claim 11, wherein said first DNA is derived from *Aspergillus*.
14. The method according to claim 11, wherein said conditions suitable for hybridization comprise standard-stringency conditions.
15. The method according to claim 11, wherein said probe comprises DNA corresponding to a portion of SEQ. ID NO:29 comprising at least 400 nucleotides.
16. DNA isolated according to the method of claim 11.
17. DNA isolated according to the method of claim 13.
18. DNA isolated according to the method of claim 14.
19. DNA isolated according to the method of claim 15.
20. An expression vector comprising the DNA according to any of claims 1 through 10.
21. A host cell transformed with the DNA according to any of claims 1 through 10.
22. A host cell transformed with the expression vector according to claim 22.
- Sub AI > 23. A purified esterase produced by the host cell of claim 18 or 19.
24. A method of producing an esterase comprising the steps of:

- (a) transforming a suitable microbial cell with an expression vector comprising a DNA according to any of claims 1 through 10;
- (b) cultivating said transformed host cell under conditions suitable for said host cell to produce said esterase;
- (c) and, optionally, separating said produced esterase from said host cells to obtain a purified esterase.

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- 25. A feed supplement comprising the enzyme produced by the method according to claim 24.
- 26. A process of treating fabric, yarn or textiles by contacting said fabric, yarn or textile with the enzyme produced according to claim 24.
- 27. A purified esterase comprising the amino acid sequence provided in Fig. 2 or a derivative thereof.
- 28. The purified esterase according to claim 27, wherein said esterase is from a filamentous fungus, bacteria or yeast.
- 29. The purified esterase according to claim 27, wherein said esterase is derived from *Aspergillus*.
- 30. The purified esterase according to claim 29, wherein said esterase is derived from *Aspergillus niger*.
- 31. The purified esterase according to claim 27, wherein said esterase corresponds to a 38kD esterase.
- 32. A purified esterase encoded by the DNA of any of claims 1 through 10.

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